Application No. 09/606,884



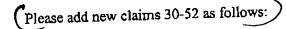
8. (Twice Amended) A battery comprising an anode, a cathode comprising vanadium oxide particles having an average diameter from about 5 nm to about 1000 nm and a binder, and a separator element disposed between the anode and the cathode, wherein the collection of vanadium oxide particles has a distribution in sizes such that at least about 95 percent of the particles have a diameter greater than about 40 percent of the average diameter and less than about 160 percent of the average diameter.

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15. (Twice Amended) A battery comprising an anode, an electrolyte, a cathode and a separator element disposed between the anode and the cathode, the electrolyte comprising lithium ions and the cathode comprising nanoparticles of electroactive material that intercalates lithium ions and a binder, wherein the electroactive material in the cathode exhibits an energy density greater than about 900 Wh/kg during discharge of the battery when discharged from 4 volts to 1.8 volts at 25°C.



20. (Amended) A method of forming a battery, the method comprising incorporating a collection of vanadium oxide particles having an average diameter from about 5 nm to about 1000 nm into a cathode structure, wherein the collection of vanadium oxide particles has a distribution in sizes such that at least about 95 percent of the particles have a diameter greater than about 40 percent of the average diameter and less than about 160 percent of the average diameter.





30. (New) The cathode composition of claim 1 wherein the collection of vanadium oxide particles has an average particle size of no more than about 500 nm.

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- 31. (New) The cathode composition of claim 1 wherein the collection of vanadium oxide particles has an average particle size of no more than about 400 nm.
- 32. (New) The cathode composition of claim 1 wherein the collection of vanadium oxide particles has an average particle size of no more than about 300 nm.
- 33. (New) The cathode composition of claim 1 wherein the collection of vanadium oxide particles has an average particle size of no more than about 200 nm.
- 34. (New) The battery of claim 8 wherein the collection of vanadium oxide particles has an average particle size of no more than about 500 nm.
- 35. (New) The battery of claim 8 wherein the collection of vanadium oxide particles has an average particle size of no more than about 400 nm.
- 36. (New) The battery of claim 8 wherein the collection of vanadium oxide particles has an average particle size of no more than about 300 nm.
- 37. (New) The battery of claim 8 wherein the collection of vanadium oxide particles has an average particle size of no more than about 200 nm.
- 38. (New) The battery of claim 15 wherein the collection of vanadium oxide particles has an average particle size of no more than about 500 nm.

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- 39. (New) The pattery of claim 15 wherein the collection of vanadium oxide particles has an average particle size of no more than about 400 nm.
- 40. (New) The battery of claim 15 wherein the collection of vanadium oxide particles has an average particle size of no more than about 300 nm.
- 41. (New) The battery of claim 15 wherein the collection of vanadium oxide particles has an average particle size of no more than about 200 nm.
- 42. (New) The battery of claim 15 wherein the collection of vanadium oxide particles has a distribution in sizes such that at least about 95 percent of the particles have a diameter greater than about 40 percent of the average diameter and less than about 160 percent of the average diameter.
- 43. (New) The method of claim 20 wherein the collection of vanadium oxide particles has an average particle size of no more than about 500 rm.
- 44. (New) The method of claim 20 wherein the collection of vanadium oxide particles has an average particle size of no more than about 400 nm.
- 45. (New) The method of claim 20 wherein the collection of vanadium oxide particles has an average particle size of no more than about 300 nm.
- 46. (New) The method of claim 20 wherein the collection of vanadium oxide particles has an average particle size of no more than about 200 nm.